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ABSTRACT

This task list is intended for use in planning and/or evaluating a competency-based course to prepare machine tool, drill press, grinding machine, lathe, mill, and/or power saw operators. The listing is divided into six sections, with each one outlining the tasks required to perform the duties that have been identified for the given occupation. The section devoted to machine tool operators covers the following duties: performing bench work (using hand and power tools) and operating a drill press, surface and cylindrical grinders, power saws, lathes, and milling machines. Each of the remaining five sections consists of two parts, an outline of the tasks required by operators of the specific tool being covered and a listing of related bench work tasks. The duty/task lists are the result of an extensive two-step development process in which information on current occupational requirements was gathered from such sources as consortia, trade associations, and current curriculum materials and was then synthesized by industry representatives, vocational instructors, and state-level representatives. (MN)

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DUTY TASK LIST

MACHINE TOOL OPERATOR
DRILL PRESS OPERATOR
GRINDING MACHINE OPERATOR
LATHE OPERATOR
MILL OPERATOR
POWER SAW OPERATOR

CE 051 537

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

OKLAHOMA OCCUPATIONAL TESTING CENTER

OKLAHOMA OCCUPATIONAL TESTING CENTER

INTRODUCTION:

Today's vocational instructors and administrators are faced with a myriad of important questions. They are searching for methods of providing accountability for students' acquisition of knowledge and skills as related to a constantly changing job market.

The Oklahoma Occupational Testing Center is in the business of eliminating some of the guesswork in answering today's tough questions. The professional staff, using a thorough and valid methodology, has developed duty/task lists for over 150 occupations in vocational education. Additional occupational duty/task lists will be made available as development is completed. These duty/task lists will help answer the following questions:

- Are students being prepared for today's jobs?
- What should today's vocational instructors be teaching?
- Is the curriculum addressing industry needs and is it up-to-date?
- How can vocational programs be improved?
- What in-service programs are needed for instructors?

BACKGROUND:

The occupational duty/task lists are the result of an extensive development process. Information regarding the occupational skills needed for employment is gathered from a number of sources such as consortia, trade associations, and current curriculum materials. This information is then synthesized by: 1) industry representatives, 2) vocational instructors, and 3) state level vocational representatives. The end result is a listing of occupations and the specific duties and tasks within each occupation. After dissemination for field review a committee of industry and vocational representatives revise the duty/task list to its final form.

USES:

The Oklahoma Occupational Testing Center's Duty/Task Lists are designed to be of value to a vocational program in several ways:

- Improving program planning
- Documenting industrial standards
- Evaluating curriculum and instruction
- Tracking individualized instruction*
- Using as a discussion tool with advisory committees
- Developing up-to-date job descriptions
- Performing self-evaluations
- Performing administrative program evaluations

INFORMATION:

To find out more about the Oklahoma Occupational Testing Center, call toll free:

1-800-654-4502.

Ask for our free catalog, listing over 150 occupations for which duty/task lists are available. CIMC curriculum materials related to these lists may also be available.

*A Progress Chart is provided for tracking individualized instruction.

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Oklahoma Occupational Testing Center

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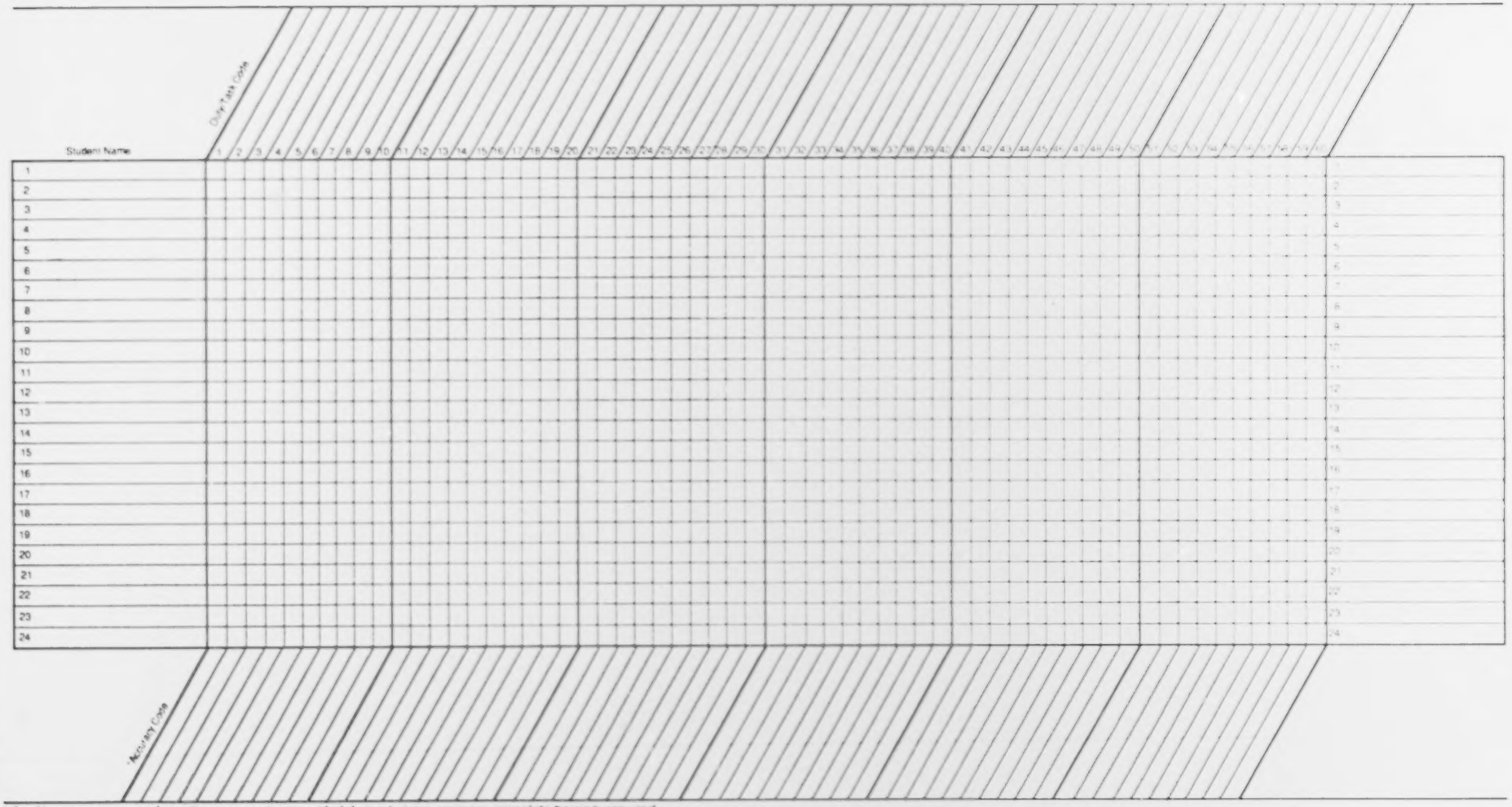
89-006023

PROGRESS CHART

OKLAHOMA OCCUPATIONAL TESTING CENTER

Program

Oklahoma State Department of Vocational and Technical Education



* 0 = No exposure - no information nor practice provided during training program; complete training required.
1 = Exposure only - general information provided with no practice time; close supervision needed and additional training required.
2 = Limited practice - has practiced during training program; additional training is required to develop skill.
3 = Moderately skilled - has performed independently during training program; limited additional training may be required.
4 = Skilled - can perform independently with no supervision.

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**This chart is intended for teacher file use only. Do not post.

DUTY/TASK LISTS

MACHINE TOOL SERIES

OCCUPATIONS:

1. Machine Tool Operator
2. Drill Press Operator
3. Grinding Machine Operator
4. Lathe Operator
5. Mill Operator
6. Power Saw Operator

DUTY/TASK LIST

MACHINE TOOL SERIES

OCCUPATION 1: MACHINE TOOL OPERATOR

DUTIES:
- B. Perform Bench Work (Using Hand and Power Tools)
- D. Operate a Drill Press
- E. Operate Surface and Cylindrical Grinders
- F. Operate Power Saws
- G. Operate Lathes
- H. Operate a Milling Machine

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OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate a Drill Press

CODE	TASK	TAUGHT	COMMENTS
D.02	Set up a press and workpiece		
D.03	Center drill and drill holes to size		
D.04	Drill a hole with automatic feed		
D.05	Drill a workpiece with drill fixtures		
D.06	Counterbore a hole to specifications		
D.07	Countersink a hole to specifications		
D.08	Ream a hole to size		
D.09	Tap a hole (manually)		
D.10	Tap a hole with tapping attachments		
D.11	Drill a hole in a part mounted in a V-block		
D.12	Spot face a part to specified dimensions		
D.13	Lay out work on a surface plate (using a surface gage)		
D.15	Lay out work with a combination square		
D.16	Measure inside and/or outside diameters with vernier calipers		
D.17	Measure work with depth gages		
D.18	Measure work with a depth micrometer		
D.19	Measure work with dial calipers		
D.20	Measure work with height gages and an indicator		
D.24	Measure work with a 6" pocket rule		
D.26	Measure work with telescope gage and hole gages		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate Surface and Cylindrical Grinders

CODE	TASK	TAUGHT	COMMENTS
E.01	Set up a surface or a cylindrical grinder		
E.04	Grind an angular surface (with a surface grinder)		
E.05	Grind the ends of end mills (with an indexing fixture on a hand-feed surface grinder)		
E.06	Grind radii and angles (on a surface grinder)		
E.07	Grind workpiece on a magnetic chuck (using a surface grinder with a power feed)		
E.08	Grind a workpiece square (using a surface grinder)		
E.09	Grind a workpiece (using a magnetic work holding device and a surface grinder)		
E.10	Grind internal (i.d.) surfaces (with a cylindrical grinder)		
E.11	Grind a workpiece between centers (on a cylindrical grinder)		
E.13	Grind a workpiece lined up with an indicator (on a surface or cylindrical grinder)		
E.16	Inspect grinding wheels		
E.17	Check work (with a radius gage)		
E.20	Measure inside and/or outside diameters (with vernier calipers)		
E.22	Measure work (with a depth micrometer)		
E.23	Measure work (with dial calipers)		
E.25	Measure work (with height gages)		
E.27	Measure work (with an outside micrometer)		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate Power Saws

CODE	TASK	TAUGHT	COMMENTS
F.01	Clean and lubricate power saw(s)		
F.02	Cut and weld band saw blade		
F.03	Replace saw blade		
F.04	Select and set feeds and speeds for sawing		
F.05	Cut material to length		
F.06	Set up power saw and cut metal to a specified angle		
F.07	Saw internal and external contours (with a vertical band saw)		
F.15	Measure work (with a 6" pocket rule)		
F.16	Measure work (with a tape measure)		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate Lathes

CODE	TASK	TAUGHT	COMMENTS
G.01	Clean and lubricate a lathe		
G.02	Align lathe centers		
G.03	Align a round workpiece in a standard four-jaw chuck		
G.04	Align a square workpiece in a standard four-jaw chuck		
G.05	Align a workpiece on a faceplate		
G.06	Face a workpiece		
G.07	Set speeds and feeds to rough cut a workpiece		
G.08	Set speeds and feeds to finish cut a workpiece		
G.09	Set up a turret lathe for simple operations		
G.10	Turn a workpiece between centers		
G.11	Turn or thread a long workpiece (with a follower and/or a steady rest)		
G.12	Cut a long external tapered surface (with a taper attachment)		
G.13	Cut a short external tapered surface (with a compound rest)		
G.14	Cut tapers (by the offset tailstock method)		
G.15	Cut external threads		
G.16	Cut tapered threads on a workpiece		
G.17	Cut metric threads		
G.18	Cut ACME threads		
G.19	Cut multiple threads		
G.20	Die cut threads (manually)		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate Lathes (Continued)

CODE	TASK	TAUGHT	COMMENTS
G.21	Die cut threads (using a die head)		
G.22	Rechase threads		
G.23	Cut internal threads		
G.24	Cut internal tapered surfaces (with a taper attachment)		
G.25	Bore holes		
G.26	Counterbore holes		
G.27	Countersink holes		
G.28	Center drill a workpiece		
G.29	Ream a hole		
G.30	Tap a hole		
G.31	Drill holes		
G.32	Neck groove a workpiece		
G.33	Chamfer a workpiece (i.d. and o.d.)		
G.34	Filet (radii cut) a workpiece		
G.36	File and polish a workpiece		
G.37	Knurl parts		
G.38	Grind a workpiece (with a tool post grinder)		
G.39	Grind and sharpen lathe tools (free hand)		
G.40	Part off (cut off) a workpiece		
G.41	Machine a part to tolerances (a step out)		
G.43	Check work (with a radius gage)		
G.44	Lay out or check work (with a surface gage)		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate Lathes (Continued)

CODE	TASK	TAUGHT	COMMENTS
G.45	Lay out work (with a combination square)		
G.46	Lay out work (with hermaphrodite calipers)		
G.47	Measure inside/outside diameters (with vernier calipers)		
G.48	Measure work (with a depth gage)		
G.49	Measure work (with a depth micrometer)		
G.50	Measure work (with dial calipers)		
G.53	Measure work (with an inside micrometer)		
G.54	Measure work (with an outside micrometer)		
G.55	Measure work (with a 6" rule)		
G.56	Measure work (with spring calipers)		
G.57	Measure work (with a tape measure)		
G.58	Measure work (with telescope and hole gages)		
G.59	Measure work (with thread wires)		

OCCUPATION: **MACHINE TOOL OPERATOR**

DUTY: **Operate a Milling Machine**

CODE	TASK	TAUGHT	COMMENTS
H.01	Clean and lubricate a milling machine		
H.02	Align a machine workpiece mounted on a machine table		
H.03	Indicate a mill head perpendicular to a machine table		
H.04	Align a milling machine vise (using indicators)		
H.05	Square a workpiece (using a table vise)		
H.06	Locate lines (with a center finder)		
H.07	Locate edges (with an edge finder)		
H.08	Bore holes to tolerance		
H.09	Drill holes		
H.10	Ream holes		
H.11	Tap a hole		
H.12	Fly cut a flat surface		
H.13	Fly cut a concave shape		
H.14	Fly cut a convex shape		
H.15	Mill an angular surface		
H.16	Mill an external radius (with a rotary table)		
H.17	Mill gears to specifications		
H.18	Mill a workpiece (with an end mill)		
H.19	Mill hex pieces (using an indexing fixture)		
H.20	Mill a slot in a round part (using V-blocks)		
H.21	Straddle mill a workpiece		

OCCUPATION: MACHINE TOOL OPERATOR

DUTY: Operate a Milling Machine (Continued)

CODE	TASK	TAUGHT	COMMENTS
H.22	Machine a wood ruff key set		
H.23	Machine an external straight key way		
H.24	Cut a radius (with a corner-rounding cutter)		
H.25	Align a part at an angle (using a sine bar and indicator)		
H.26	Lay out work on a surface plate		
H.27	Lay out or check work (with a surface gage)		
H.28	Lay out work (with a combination square)		
H.29	Measure inside/outside diameters (with vernier calipers)		
H.30	Measure work (with depth gages)		
H.31	Measure work (with a depth micrometer)		
H.32	Measure work (with dial calipers)		
H.33	Measure work (with gage blocks)		
H.34	Measure work (with height gages)		
H.36	Measure work (with an inside micrometer)		
H.37	Measure work (with an outside micrometer)		
H.38	Measure work (with a 6" pocket rule)		
H.39	Measure work (with spring calipers)		
H.40	Measure work (with telescope and hole gages)		

DUTY/TASK LIST

MACHINE TOOL SERIES

OCCUPATION 2: DRILL PRESS OPERATOR

DUTIES: B. Perform Bench Work (Using Hand and Power Tools)
D. Operate a Drill Press

OKLAHOMA OCCUPATIONAL TESTING CENTER

OCCUPATION: DRILL PRESS OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: DRILL PRESS OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: DRILL PRESS OPERATOR

DUTY: Operate a Drill Press

CODE	TASK	TAUGHT	COMMENTS
D.02	Set up a press and workpiece		
D.03	Center drill and drill holes to size		
D.04	Drill a hole with automatic feed		
D.05	Drill a workpiece with drill fixtures		
D.06	Counterbore a hole to specifications		
D.07	Countersink a hole to specifications		
D.08	Ream a hole to size		
D.09	Tap a hole (manually)		
D.10	Tap a hole with tapping attachments		
D.11	Drill a hole in a part mounted in a V-block		
D.12	Spot face a part to specified dimensions		
D.13	Lay out work on a surface plate (using a surface gage)		
D.15	Lay out work with a combination square		
D.16	Measure inside and/or outside diameters with vernier calipers		
D.17	Measure work with depth gages		
D.18	Measure work with a depth micrometer		
D.19	Measure work with dial calipers		
D.20	Measure work with height gages and an indicator		
D.24	Measure work with a 6" pocket rule		
D.26	Measure work with telescope gage and hole gages		

DUTY/TASK LIST

MACHINE TOOL SERIES

OCCUPATION 3: GRINDING MACHINE OPERATOR

DUTIES: B. Perform Bench Work (Using Hand and Power Tools)
E. Operate Surface and Cylindrical Grinders

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OCCUPATION: GRINDING MACHINE OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: GRINDING MACHINE OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: GRINDING MACHINE OPERATOR

DUTY: Operate Surface and Cylindrical Grinders

CODE	TASK	TAUGHT	COMMENTS
E.01	Set up a surface or a cylindrical grinder		
E.04	Grind an angular surface (with a surface grinder)		
E.05	Grind the ends of end mills (with an indexing fixture on a hand-feed surface grinder)		
E.06	Grind radii and angles (on a surface grinder)		
E.07	Grind workpiece on a magnetic chuck (using a surface grinder with a power feed)		
E.08	Grind a workpiece square (using a surface grinder)		
E.09	Grind a workpiece (using a magnetic work holding device and a surface grinder)		
E.10	Grind internal (i.d.) surfaces (with a cylindrical grinder)		
E.11	Grind a workpiece between centers (on a cylindrical grinder)		
E.13	Grind a workpiece lined up with an indicator (on a surface or cylindrical grinder)		
E.16	Inspect grinding wheels		
E.17	Check work (with a radius gage)		
E.20	Measure inside and/or outside diameters (with vernier calipers)		
E.22	Measure work (with a depth micrometer)		
E.23	Measure work (with dial calipers)		
E.25	Measure work (with height gages)		
E.27	Measure work (with an outside micrometer)		

DUTY/TASK LIST

MACHINE TOOL SERIES

OCCUPATION 4: LATHE OPERATOR

DUTIES: B. Perform Bench Work (Using Hand and Power Tools)
G. Operate Lathes

OCCUPATION: LATHE OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: LATHE OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: LATHE OPERATOR

DUTY: Operate Lathes

CODE	TASK	TAUGHT	COMMENTS
G.01	Clean and lubricate a lathe		
G.02	Align lathe centers		
G.03	Align a round workpiece in a standard four-jaw chuck		
G.04	Align a square workpiece in a standard four-jaw chuck		
G.05	Align a workpiece on a faceplate		
G.06	Face a workpiece		
G.07	Set speeds and feeds to rough cut a workpiece		
G.08	Set speeds and feeds to finish cut a workpiece		
G.09	Set up a turret lathe for simple operations		
G.10	Turn a workpiece between centers		
G.11	Turn or thread a long workpiece (with a follower and/or a steady rest)		
G.12	Cut a long external tapered surface (with a taper attachment)		
G.13	Cut a short external tapered surface (with a compound rest)		
G.14	Cut tapers (by the offset tailstock method)		
G.15	Cut external threads		
G.16	Cut tapered threads on a workpiece		
G.17	Cut metric threads		
G.18	Cut ACME threads		
G.19	Cut multiple threads		
G.20	Die cut threads (manually)		

OCCUPATION: LATHE OPERATOR

DUTY: Operate Lathes (Continued)

CODE	TASK	TAUGHT	COMMENTS
G.21	Die cut threads (using a die head)		
G.22	Rechase threads		
G.23	Cut internal threads		
G.24	Cut internal tapered surfaces (with a taper attachment)		
G.25	Bore holes		
G.26	Counterbore holes		
G.27	Countersink holes		
G.28	Center drill a workpiece		
G.29	Ream a hole		
G.30	Tap a hole		
G.31	Drill holes		
G.32	Neck groove a workpiece		
G.33	Chamfer a workpiece (i.d. and o.d.)		
G.34	Filet (radii cut) a workpiece		
G.36	File and polish a workpiece		
G.37	Knurl parts		
G.38	Grind a workpiece (with a tool post grinder)		
G.39	Grind and sharpen lathe tools (free hand)		
G.40	Part off (cut off) a workpiece		
G.41	Machine a part to tolerances (a step out)		
G.43	Check work (with a radius gage)		
G.44	Lay out or check work (with a surface gage)		

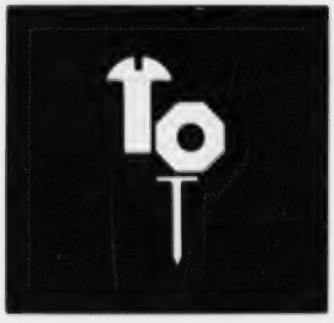
OCCUPATION: LATHE OPERATOR

DUTY: Operate Lathes (Continued)

CODE	TASK	TAUGHT	COMMENTS
G.45	Lay out work (with a combination square)		
G.46	Lay out work (with hermaphrodite calipers)		
G.47	Measure inside/outside diameters (with vernier calipers)		
G.48	Measure work (with a depth gage)		
G.49	Measure work (with a depth micrometer)		
G.50	Measure work (with dial calipers)		
G.53	Measure work (with an inside micrometer)		
G.54	Measure work (with an outside micrometer)		
G.55	Measure work (with a 6" rule)		
G.56	Measure work (with spring calipers)		
G.57	Measure work (with a tape measure)		
G.58	Measure work (with telescope and hole gages)		
G.59	Measure work (with thread wires)		

DUTY/TASK LIST

MACHINE TOOL SERIES



OCCUPATION 5: MILL OPERATOR

DUTIES: B. Perform Bench Work (Using Hand and Power Tools)
H. Operate a Milling Machine

OKLAHOMA OCCUPATIONAL TESTING CENTER

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OCCUPATION: MILL OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: MILL OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: MILL OPERATOR

DUTY: Operate a Milling Machine

CODE	TASK	TAUGHT	COMMENTS
H.01	Clean and lubricate a milling machine		
H.02	Align a machine workpiece mounted on a machine table		
H.03	Indicate a mill head perpendicular to a machine table		
H.04	Align a milling machine vise (using indicators)		
H.05	Square a workpiece (using a table vise)		
H.06	Locate lines (with a center finder)		
H.07	Locate edges (with an edge finder)		
H.08	Bore holes to tolerance		
H.09	Drill holes		
H.10	Ream holes		
H.11	Tap a hole		
H.12	Fly cut a flat surface		
H.13	Fly cut a concave shape		
H.14	Fly cut a convex shape		
H.15	Mill an angular surface		
H.16	Mill an external radius (with a rotary table)		
H.17	Mill gears to specifications		
H.18	Mill a workpiece (with an end mill)		
H.19	Mill hex pieces (using an indexing fixture)		
H.20	Mill a slot in a round part (using V-blocks)		
H.21	Straddle mill a workpiece		

OCCUPATION: MILL OPERATOR

DUTY: Operate a Milling Machine (Continued)

CODE	TASK	TAUGHT	COMMENTS
H.22	Machine a wood ruff key set		
H.23	Machine an external straight key way		
H.24	Cut a radius (with a corner-rounding cutter)		
H.25	Align a part at an angle (using a sine bar and indicator)		
H.26	Lay out work on a surface plate		
H.27	Lay out or check work (with a surface gage)		
H.28	Lay out work (with a combination square)		
H.29	Measure inside/outside diameters (with vernier calipers)		
H.30	Measure work (with depth gages)		
H.31	Measure work (with a depth micrometer)		
H.32	Measure work (with dial calipers)		
H.33	Measure work (with gage blocks)		
H.34	Measure work (with height gages)		
H.36	Measure work (with an inside micrometer)		
H.37	Measure work (with an outside micrometer)		
H.38	Measure work (with a 6" pocket rule)		
H.39	Measure work (with spring calipers)		
H.40	Measure work (with telescope and hole gages)		

DUTY/TASK LIST

MACHINE TOOL SERIES

OCCUPATION 6: POWER SAW OPERATOR

DUTIES: B. Perform Bench Work (Using Hand and Power Tools)
F. Operate Power Saws

OKLAHOMA OCCUPATIONAL TESTING CENTER

OCCUPATION: POWER SAW OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools)

CODE	TASK	TAUGHT	COMMENTS
B.01	Locate holes (with transfer screws and transfer punches)		
B.02	Make layout hole centers (with prick punches and center punches)		
B.03	Drill holes (with a drill motor)		
B.05	Remove broken drills and taps from workpieces		
B.06	Remove damaged screws from workpieces		
B.07	Install a helical coil wire screw insert		
B.08	Ream holes (with a hand reamer)		
B.09	Cut threads (with a die)		
B.10	Cut threads (with a hand tap)		
B.11	Bench file radii on a workpiece		
B.13	Test the hardness of a workpiece (without a hardness tester)		
B.14	Hone a workpiece or cutting tool		
B.15	Assemble and/or disassemble a workpiece (with an arbor press)		
B.16	Straighten a workpiece (on an arbor press)		
B.17	Broach a workpiece (with a broaching tool)		
B.18	Cut material (with a hacksaw -- manually)		
B.19	Work and shape metal (with a belt/disc sander)		
B.20	Work and shape metal (with a hand grinder)		
B.21	Work and shape metal (with a pedestal grinder)		
B.24	Buff and polish a part		

OCCUPATION: POWER SAW OPERATOR

DUTY: Perform Bench Work (Using Hand and Power Tools) (Continued)

CODE	TASK	TAUGHT	COMMENTS
B.25	Dress and true a pedestal grinder wheel		
B.26	Grind and shape chisels and punches (on a pedestal grinder)		
B.27	Rough grind a workpiece (with a hand grinder)		

OCCUPATION: POWER SAW OPERATOR

DUTY: Operate Power Saws

CODE	TASK	TAUGHT	COMMENTS
F.01	Clean and lubricate power saw(s)		
F.02	Cut and weld band saw blade		
F.03	Replace saw blade		
F.04	Select and set feeds and speeds for sawing		
F.05	Cut material to length		
F.06	Set up power saw and cut metal to a specified angle		
F.07	Saw internal and external contours (with a vertical band saw)		
F.15	Measure work (with a 6" pocket rule)		
F.16	Measure work (with a tape measure)		